

# SCIENTIFIC AND TECHNICAL INFORMATION

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# Simply Put

Tips for creating easy-to-read print materials your  
audience will want to read and use



Office of Communication

**SCIENTIFIC AND  
TECHNICAL INFORMATION**

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**Simply Put**

Second Edition

Office of Communication  
Centers for Disease Control and Prevention  
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# Introduction

At CDC (Centers for Disease Control and Prevention), we must communicate a broad range of health messages to a wide variety of audiences. We often do this through print materials—especially brochures, pamphlets, booklets, and fact sheets.

Surveys have shown that nearly half of American adults read at basic levels, and that one in five adults in the United States reads below a fifth grade level. Even skilled readers are turning less and less to print materials for information, relying instead on the quick information they get on television, radio, and the Internet. Therefore, if we want CDC's print materials to be used, we must make them easy to read and attractive to the audiences we wish to reach.

This guide will help you translate the complicated scientific and technical information generated at CDC into material that captures and keeps the interest of your intended readers. It will teach you how to write simply, use language and visuals that your audience relates to and understands, and organize the information so it's easy to act on and recall.

***A couple of notes:***

- The tips in this guide will be most relevant to creating brochures, booklets, and pamphlets, but many of the principles will also apply to other formats.
- We produced *Simply Put* using black ink only as a reminder that effective products do not always need to be in color.

## Where this Guide Fits into an Overall Communication Plan

Developing a communication plan involves many steps, and this guide will help you accomplish just one of them—designing your print materials.

This guide assumes that you have already done several things:

- ✓ Identified your target audience and its health problem or interest
- ✓ Defined key characteristics of audience members, including their sex, race, location, beliefs, behaviors, likes and dislikes, and reading level
- ✓ Determined your key messages and how best to present them to your audience
- ✓ Chosen print as the best means of communicating your message to your audience
- ✓ Figured out how you will get your material to your audience (e.g., by mail, in brochure racks, or through a hotline)

By first finding out if someone needs or wants the information your material will provide, you will make sure you are spending agency funds and staff time wisely. By finding out all you can about your intended readers, you can tailor your material to fit their needs and desires. And knowing the best places to reach your audience will help you decide on the format and design of your material.

Once you have developed a prototype of your material, you need to pretest the draft with your target audience. Pretesting helps ensure that the message you send is the message your audience receives, rather than some other interpretation. You will use the results of the pretest to revise your materials. You may also need to get clearance from the Department of Health and Human Services (HHS) to produce your material.\* Once you have cleared and printed your material, the next steps are to market it, distribute it, and evaluate its effectiveness in communicating key messages to your target audience.

This guide does not discuss all of these steps, but Appendix B contains a list of resources to help you through many aspects of communication planning.

\* The CDC Office of Communication coordinates the HHS clearance process. Call your CIO communication office or CDC OC (404/639-7338) for more information.

# Message Content

You are creating your print materials because you want to share information with your audience that will increase knowledge or inspire a change in beliefs or behaviors. This section gives you 5 tips for deciding *what* to say and *how* to say it so your audience will understand, remember, and act on your message.

## **1. Limit the number of messages.**

Present your readers with no more than three or four main ideas per document or section of your document.

Tell readers only what they need to know.

Skip details that are nice to know.

*For example.* If you are writing a brochure about how to prevent Lyme disease, you don't need to tell readers how and when Lyme disease was discovered.

Stick to one idea at a time.

Develop one idea fully before moving to the next idea. Skipping back and forth between topics can confuse readers.

Avoid lengthy lists.

Limit lists to five or six items. Readers—especially unskilled readers—tend to forget items in longer lists.

## **2. Tell readers what you want them to do.**

State clearly the actions you want your reader to take.

Use concrete nouns and active voice.

*Say:* To avoid getting sick from food, follow these rules:

- Cook meat until it is not pink in the middle.
- Wash hands after handling raw meat.
- Wash fresh fruits and vegetables before eating.
- Keep hot food hot and cold food cold.

*Not:* Following safety precautions can reduce foodborne disease transmission.

Accentuate the positive.

Tell your readers what they should do rather than what they should not do.

*Say:* Wear your helmet each time you ride your bicycle.

*Not:* Do not ride your bicycle without wearing your helmet.

## **3. Tell readers what they'll gain from reading your material.**

Readers want to know how reading your materials will benefit them.

Answer the question, "What's in it for me?"

*For example:* In a booklet about how to quit smoking, tell readers right away that the information in the booklet could help them live longer, healthier lives.

## **4. Choose your words carefully.**

Keep it short.

Use words with one or two syllables when you can. Make most sentences 8-10 words. Limit paragraphs to 3-5 sentences.

Write as if you were talking to friend.

A conversational style has a more natural tone and is easier to read and understand. Read aloud what you've written to see how it sounds.

*Say:* If you go near this chemical, you could get sick.

*Not:* Exposure to this chemical could cause adverse health effects.

Avoid "talking down" to your readers.

If you make readers feel bad about their current behavior or health situation, they may be less likely to read and use the information in your materials.

Limit use of jargon and technical or scientific language.

If you must use jargon or technical terms, explain them in language your audience will understand.

*For example:* Rather than saying “hypertension,” why not say “high blood pressure”? Instead of “contraception,” why not “birth control”?

Choose words with a single definition or connotation.

*For example:* “Poor workers” could mean workers with poor performance or workers with limited income. Unskilled readers may not be able to figure out the meaning from the context.

Be consistent with word use.

Pick the most familiar words and use them throughout.

*For example:* Mad cow disease and bovine spongiform encephalitis may be the same thing to you, but your reader may think they are two different diseases.

Use analogies familiar to your audience.

*Say:* Feel for lumps about the size of a pea.

*Not:* Feel for lumps about 5-6 mm in diameter.

Avoid abbreviations and acronyms when you can.

When using an abbreviation or acronym, give it first and spell the word(s) out in parentheses.

*For example:* Put your baby to sleep on his side or back to lower the risk of SIDS (sudden infant death syndrome).

Instead of statistics, use general words like *most*, *many*, *half*.

If you must use statistics, try putting them in parentheses.

*Say:* A survey showed that most Americans (90%) believe the risk from vaccines is very small.

*Not:* A survey revealed that 90% of Americans believe the risk from vaccines is very small.

Avoid use of symbols.

*For example:* Alcohol + Pregnancy = Fetal Alcohol Syndrome

This example is hard to figure out for some readers.

*Try instead:* If you are pregnant, do not drink alcohol or your baby could be born with a serious health problem called FAS (fetal alcohol syndrome).

Limit use of quotation marks. When writing dialogue, use other ways to show who is speaking.

*For example.*

Jane: How hard can it be to stop smoking?

Ann: Most people have a very hard time quitting. That's why I never started smoking in the first place.

## **5. Be sensitive to cultural differences.**

Use terms that your audience is familiar and/or comfortable with.

*For example.* If your audience of elderly people with diabetes usually go to the health department for treatment, use “clinic” in your pamphlet about getting regular check-ups, not “doctor’s office.”

If you need to identify a group of people by race or ethnicity, use a term preferred by that group.

Preferred terms may vary even within an ethnic or racial group.

*For example.* One group may want to be identified as “African American.” Another group may prefer to be identified as “Black.”

Tailor messages to each cultural or ethnic group or subgroup.

Groups may have different needs, values, and beliefs that will affect how they interpret your message. And minority groups often have subgroups that differ greatly from one another. What is effective for one minority group or subgroup may not work at all for another.

<p><i>Note:</i> The best way to make sure your materials are culturally appropriate is to talk to members of the target audience before designing your materials. Then, let them review your draft and provide feedback.</p>
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# Text Appearance

The way your text looks can greatly affect readability. Follow these simple tips.

Use font sizes between 12 and 14 points.

Anything less than 12 points can be too small for many audiences. Older people and people who have trouble reading may need larger print. Use a font size at least 2 points larger than the text size for headings.

## *Examples of Font Sizes*

This is 8 point.

This is 10 point.

This is 12 point.

This is 14 point.

This is 16 point.

This is 18 point.

For the body of the text, use fonts with serifs, like the one used in this line. (Serifs are the little “feet” on letters.)

**Fonts without serifs (sans serifs), like the one used in this line, are harder to read. Limit sans serifs fonts to headings and subheadings.**

Do not use **FANCY** or *script* lettering.

Mix upper and lower case letters (like in this line).

ALL CAPS ARE HARDER TO READ.

Use boldface or underlining to emphasize words or phrases.

Limit using *italics*.

Use dark letters on a light background.

Light text on a dark background is harder to read.

# Visuals

Visuals can enhance your materials if used correctly. This section provides 5 steps to help you choose effective, appealing visuals.

## **1. Use visuals to help communicate your messages.**

Present one message per visual.

When you show several messages in one visual, readers may miss some or all of the messages.

Create visuals that help emphasize or explain the text. Steer clear of visuals that decorate your materials or are very abstract.

*For example.* Images A and B are illustrations for the cover of a brochure on what to do if you get hurt on the job at a construction site. Image A, an abstract image for first aid, does not enhance meaning. But Image B, which shows two workers using a first aid kit, clearly relates to the subject of the brochure—and it shows an action the brochure will discuss.

Image A

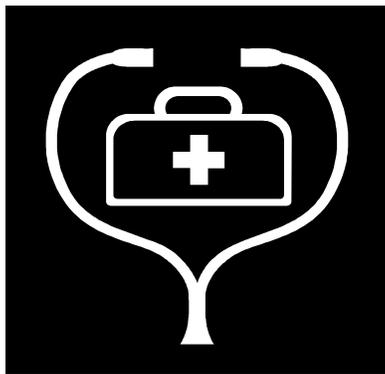


Image B



Show the actions you want your readers to take. Avoid images that show what the reader should not do.

*For example.* If you are telling readers to choose healthy snacks, such as fruit, instead of sweets and junk food, image A is more effective because it shows readers what to eat. It reinforces your message. Image B shows readers what they should not eat, but it gives them no visual link to what they should eat. Also, some cultures do not understand that an “X” through an item means “no.”

Image A

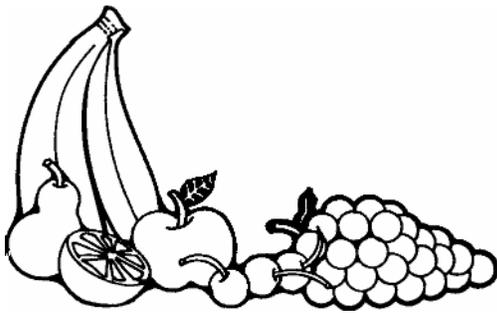
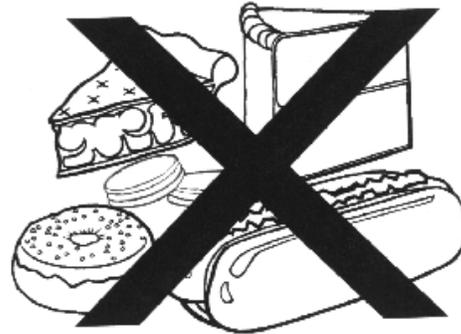


Image B



## **2. Choose the best type of visual for your materials.**

Photographs may work best for depicting “real life” events, showing people, and conveying emotions.

If you use photos, be sure that material in the background will not distract your reader.

Simple illustrations or line drawings may work best for showing a procedure (drawing blood), depicting socially sensitive issues (drug addicts), and explaining an invisible or hard-to-see situation (airborne transmission of TB).

Use simple drawings and avoid unnecessary details. Steer clear of abstract illustrations that could be misinterpreted.

Cartoons may be good to convey humor or set a more casual tone.

Use caution with cartoons; not all audiences understand them or take them seriously.

Pretesting visuals with your target audience will help you decide which type is best.

### **3. Make visuals culturally relevant and sensitive.**

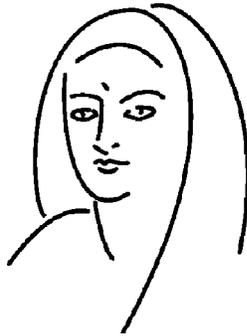
Use images and symbols familiar to your audience.

*For example:* Not all cultures understand that this image means “no smoking.”



If you show people in your visuals, make them of the same racial or ethnic group as your target audience.

Choose clothing styles that your target audience would wear. For materials designed for diverse audiences, show people from a variety of ethnic, racial, and age groups.



*For example:* You might use a drawing like this one if your audience were Indian women.

### **4. Make visuals easy for your readers to follow and understand.**

Place illustrations near the text to which they refer.

*For example:* If you place a drawing in the top, right-hand corner that relates to text found in the lower, left-hand corner, readers may not connect the drawing to your written message.

Use brief captions that include your key message.

*For example:* From the caption, the reader knows exactly what the visual is trying to convey. The caption also repeats a sentence found in the body of the document, which helps to reinforce the message.

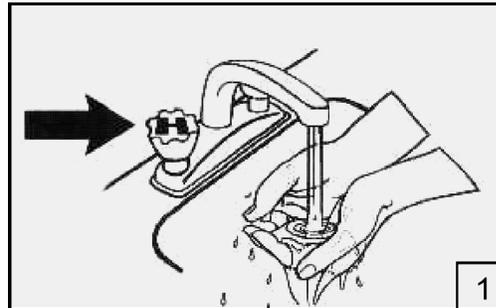


Wear gloves to avoid spreading disease.

When showing a sequence, number the images.

*For example:*

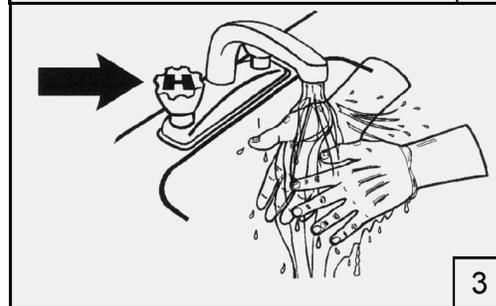
1. Wet hands with warm water.



2. Rub hands together with soap for 10-15 seconds.



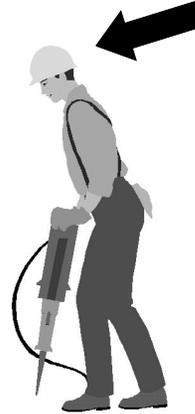
3. Rinse off all of the soap using warm water.



Use cues like arrows and circles to point out key information in your visuals.

*For example:* The image below is for a brochure on how to avoid injuries at a construction site. The arrow directs readers to the hard hat, the most important item in the drawing.

Always wear a hard hat  
at the job site.



**5. When illustrating internal body parts or small objects, use realistic images and place them in context.**

When showing internal body parts, include the outside of the body. Avoid cutting off body parts.

*For example:* Without showing the body for context, readers may not know what Image 1 is. Image 2 is much more clear.

Image 1

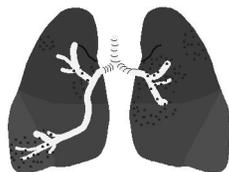


Image 2



Do not use cartoon-like drawings of body parts or other health-related images.

Draw small objects larger to show detail, but also show to scale compared to something familiar to your audience.

*For example.* The mosquito below is drawn several times larger than actual size to show readers what it looks like. Then it is shown next to a penny so readers can see how big it really is.



Enlarged to show detail



Shown to scale

## **6. Use only professional, adult-looking visuals.**

Avoid poor quality visuals.

They make your messages less credible. And adults may not even pick up your materials if they contain childish or “cutesy” visuals.

Need help creating effective visuals?

Most CIOs have graphic artists on staff. If you're not sure where to find them, check with your CIO's Office of Communication. PHPPO and MASO can also help.

# Layout and Design

You can present your information and visuals in ways that make your materials easier to read and more appealing to your audience. Here are 4 ideas.

## **1. Design an effective cover.**

Make the cover attractive to your target audience.

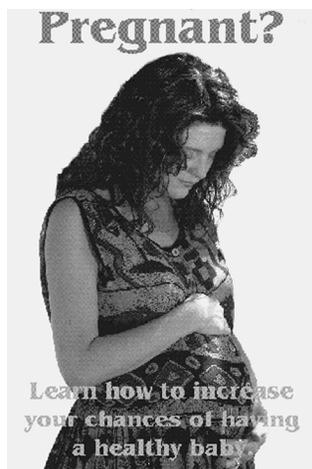
If the cover does not include images and colors your intended readers like, they may not pay attention to it.

Show the main message and target audience on the cover.

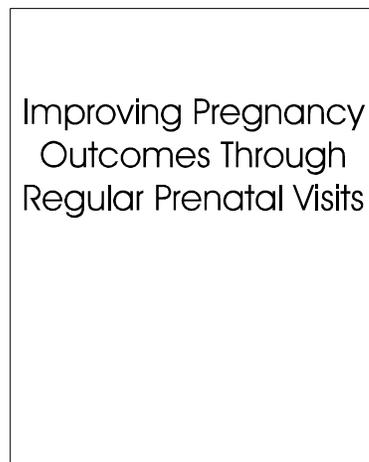
Readers should be able to grasp your main idea just by looking at the cover.

*For example.* Cover A is much more effective than Cover B in getting the attention of your audience (pregnant women) and in telling readers what they can expect to find inside.

Cover A



Cover B



## **2. Organize your messages so they are easy to act on and recall.**

Present one complete idea on one page or two facing pages.

If readers have to turn the page in the middle of your message, they may forget the first part of the message.

Place the most important information at the beginning and end of the document.

The best method is to state your main message first thing, expand on your message in the middle of the document, and repeat the main message at the end.

Organize ideas in the order that your target audience will use them.

*For example:* In a brochure about what to do if you find a chemical spill, tell readers to 1) leave the area right away, 2) note the location of the spill, 3) report it to the police or fire department, and 4) warn others to stay away from the area.

Use headings and sub-headings to “chunk” text.

These cue the reader to upcoming message content. Use headings that express a complete idea, rather than just a word or two.

*For example:* In a brochure about injury prevention, heading A communicates much more information than heading B.

Heading A: Wear your seatbelt—It could save your life.

Heading B: Seat Belts

Questions often work well as subheadings. Readers can skim the questions to see which ones apply to them or are of greatest interest. And questions can make your materials seem interactive.

Leave more space above headings and subheadings than below them. This gives a stronger visual link between the heading and the text that follows.

### 3. Leave lots of white space.

Leave at least 5 inch to 1 inch of white space around the margins of the page and between columns.

Limit the amount of text and visuals on the page.

*For example.* The document on the left is easier to read than the one on the right because it has more white space and just one visual.



### 4. Make the text easy for the eye to follow.

Break up text with bullets.

*For example.* The bullets used in the example on the left make the items in the list easier to read than in the paragraph on the right.

Children should get these shots by age 2:

- measles/mumps/rubella
- *Haemophilus influenzae* type b
- polio
- diphtheria, tetanus, pertussis
- hepatitis B
- varicella

By age 2, children should get shots against measles/mumps/rubella; *Haemophilus influenzae* type b; polio; diphtheria, tetanus, pertussis; hepatitis B; and varicella.

Do not justify the right margin.

Right-justified margins cause uneven spacing between words. Uneven spacing can confuse unskilled readers. Compare the samples below.

*Sample 1*

This column does not have a right-justified margin. The spaces between words are even. The jagged right edge also makes it easier to distinguish one line from the others.

*Sample 2*

This column has right-justified margins. The spaces between words are uneven and the lines are all the same length. This can confuse readers, especially unskilled readers, and make it harder to differentiate one line from the others.

Use columns.

Columns with line lengths of 40-50 characters are easiest to read. Compare paragraphs A, B, and C below.

*Paragraph A*

This column is only 20-25 characters long and is hard to read. Your eye jumps back and forth too much and gets tired quickly.

*Paragraph B*

This column is the best length. It is 40-50 characters long. Your eye can return to the beginning of the next line easily, and it doesn't jump back and forth very much. Try to design your materials with columns like this one.

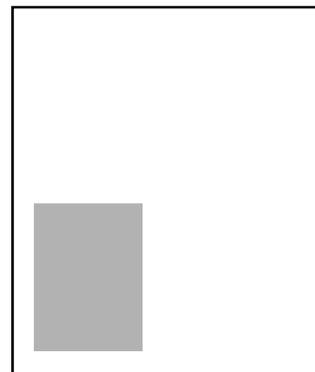
*Paragraph C*

This paragraph is hard to read, especially for unskilled readers, because the lines are so long. After reading one line, the eye has to move back across the entire page to find the start of the next line. Paragraphs that run across the whole page also look very dense and don't allow for much white space on the page.

Place key information in a text box.

Text boxes make it easier for your reader to find the most important information on the page.

*For example:* The eye is drawn to the shaded box on the sample page on the right.



## Tips on Translation

While it is best to develop your materials in the language of your target audience, translating them from English (or another language) is often all you have time or resources for. This section will help you ensure that translations of your materials are both culturally and linguistically appropriate.

*Remember:* Messages that work well with an English-speaking audience may not work for audiences who speak another language.

Find out about your target audience's values, health beliefs, and cultural perspectives. You can do this by conducting focus groups or other kinds of audience research.

Design material for minority populations based on subgroups and geographic locations.

All members of a minority population are not alike. Mexican Americans, for example, may respond differently than Cuban Americans to certain words, colors, and symbols. Likewise, Korean women living in New York City may view a health issue very differently from Korean women living in Los Angeles.

Get advice from community organizations in the areas you wish to reach.

Local groups that work regularly with your target audience can give you valuable insight about your audience. They can also recruit participants for focus group testing and help you gain the trust of your audience.

Carefully select and instruct your translator.

Hire a translator who knows a lot about your target audience and has translated many types of documents. Tell your translator the purpose of the materials, the appropriate reading level, and the main messages to convey. Review any medical or technical terms the translator does not know.

Avoid literal translation.

Allow your translator to select from a wide range of expressions, phrases, and terms used by the target audience. This flexibility will result in more culturally appropriate material.

Use the back-translation method.

Once the material has been translated to the target language, translate it back to English. (This step should be done by someone other than the original translator.) This will make sure the meaning and tone of the message have stayed the same.

Field test draft materials with members of the target audience.

This step will allow you to get feedback from your actual readers and to make changes based on their comments and suggestions.

Avoid these common pitfalls:

- ⇒ Do not translate English slang phrases or idioms literally.
- ⇒ Do not translate into a dialect unless it is used by your target audience.
- ⇒ Do not omit accents—make sure your word processing and desktop publishing software have all the accents used in your target language.

*Note:* If you list a phone number to call for more information, make sure staff fluent in the target language are available during business hours (or around the clock if on a 24-hour hotline). You will frustrate your readers if they cannot reach someone who is fluent in their language at the phone number they were given. This can undermine your overall communication efforts.

## Testing for Readability

Readability is a gauge of how easy or difficult materials are to read. Testing for readability allows you to make sure the reading level of your materials matches the reading skills of your target audience. This is important, because if your materials are written at too high a reading level for your audience to understand, your message will be lost. If you are unable to find out what your audience's reading ability is, aim for a readability level of grade 6 or 7, the level at which most newspapers are written.

You can test for readability by hand or using computer software. For doing readability tests by hand, we recommend the Fry method. This method is explained in the following pages. It is relatively simple and yields accurate results, even for material written at very low reading grade levels (5th grade and below).

Several word processing software programs—including Corel WordPerfect and Microsoft Word—allow you to test readability. These computer tests provide a quick analysis of readability along with useful information like the number of times passive voice is used, the number of words per sentence, and the number of sentences per paragraph. However, computer tests may not be as accurate as tests done by hand, so the reading levels they yield should be used only as a very rough measure.

A word of caution: Readability tests give you a general idea of how hard the document will be to read based only on the words it contains. They do not consider the effects of layout or design elements. And they cannot tell you how well your audience will accept or understand your message. Pretesting your material with the target audience is the best way to judge if it will be an effective communication tool.

# Calculating Readability Using the Fry Method

1. Randomly choose three passages from your document and count out exactly 100 words for each passage, starting with the beginning of a sentence.
2. Count the number of sentences in each of the three passages you chose. For the last sentence of each passage, estimate to the nearest 1/10 what portion of the sentence is completed up to the 100th word.
3. Count the total number of syllables in each 100-word passage. A short cut for this step is to mark only the syllables after the first syllable of each word. Then count up the marks and add 100 (one syllable per word) to that total.
4. Find the average number of sentences and the average number of syllables for the three passages by dividing the total of all three samples by three.
5. Look at the Fry graph on page 28. Find the average number of *syllables* on the horizontal axis and the average number of *sentences* on the vertical axis. Where these points intersect is the grade level of your document.

See pages 26-27 for a sample Fry test.

Other information about this method:

- Count proper nouns.
- A word is defined as a group of symbols with a space on either side. So, “CDC,” “1997,” and “&” are each considered a word.
- For initials, acronyms, and numbers, count one syllable for each symbol. So, “CDC” equals three syllables and “1997” equals four syllables.
- Only count the first time you see a multi-syllabic word that is well-known to your audience (e.g., hemophilia, diabetes, respirator).

**Note:** If you think the reading level of your document is too high because of long names of organizations, diseases, or other proper nouns, do a Fry test without those words. It may be that the readability is at the right level, except for the long names. But, if you find that the reading level is still too high even when you don't count the long names, you may want to try to simplify the language. For ideas on substituting easier words and phrases, take a look at the reference library found at <http://www.plainlanguage.gov/library/smpl1.htm>.

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For information on testing readability of Spanish language materials, read:  
Gilliam B, Pena SC, Mountain L. The Fry Graph Applied to Spanish  
Readability. *The Reading Teacher*, Jan. 1980, 426-430.

# Using Fry on Short Documents

When your document has fewer than 300 words, you can use an adaptation of the Fry method.

- If you have 100 running words, use them. Count the number of syllables and sentences just as you would for longer documents and plot that information on the Fry graph.
- If you have fewer than 100 words in a passage, you'll have to do some math to estimate the reading level. First, divide 100 by the number of words in your passage. Then count the number of syllables and sentences in the passage. Finally, multiply those figures by the number you got in the first step. Plot those 'adjusted' numbers on the Fry graph.

Here are two examples.

This example has 154 words. Count only the first 100.

The Global Health Odyssey (GHO), or CDC's museum, is a small exhibit area with attached theater. It is both a visitors' center and an interactive educational facility. Our mission is to educate all who visit about the value of prevention-based public health. Besides the cafeteria and a souvenir store, the museum is the only part of CDC that is open to the public.

The GHO includes a lobby with a video wall, on which a 5-minute, introductory video is shown. From this lobby, visitors enter a series of four tableaux showing various issues CDC addresses today. An historic section follows that provides an overview of CDC's heritage, its development over the years, and its current activities. This area also includes several interactive centers to engage children and adults alike. From this exhibit area, visitors can enter the Discovery Theater to view educational videos, demonstrations, and hear CDC volunteer speakers on a variety of topics.

6.2 sentences, 186 syllables

Reading level = 17+

Hepatitis A is a liver disease caused by the hepatitis A virus.

Hepatitis A can affect anyone. In the United States, hepatitis A can occur in situations ranging from isolated cases of disease to widespread epidemics.

Good personal hygiene and proper sanitation can help prevent hepatitis A. Vaccines are also available for long-term prevention of hepatitis A virus infection in persons 2 years of age and older. Immune globulin is available for short-term prevention of hepatitis A virus infection in all ages.

82 words total

$$\frac{100}{82} = 1.22$$

6 sentences

$$6 \times 1.22 = 7.3$$

177 syllables

$$177 \times 1.22 = 216$$

grade level = 17+

This example has fewer than 100 words. Use them all.

# Planning a trip to Asia?



*These tips will help you stay healthy on your trip.*

## Before Before You Go: Talk to Your Doctor

#1

4 sentences  
154 syllables



As soon as you start planning your trip, ask your doctor if you need any of these shots or medicines to avoid getting sick.

*Even if you were born in Asia, you may still need these shots or medicines:*

- Immune Globulin or the vaccine to prevent Hepatitis A
- Booster shots of tetanus or polio vaccine
- Vaccines for Hepatitis B, Typhoid, Rabies, and Japanese B Encephalitis

Check that all your shots like measles, diphtheria, and rubella are up-to-date.

*If you are pregnant, elderly, traveling with a small child, or have a chronic illness, your doctor may have special advice for you.*

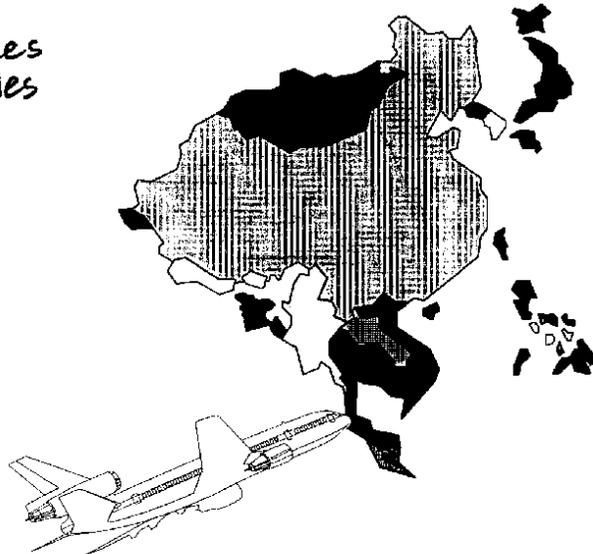
## Prevent Illness from Food and Water

Follow these tips to avoid getting sick from food and water.

- Drink only bottled or boiled water or carbonated drinks.
- Eat only food that is completely cooked.
- Avoid dairy products unless you know they are pasteurized.
- Avoid shellfish and blowfish—these can contain toxins that may not be killed by cooking.
- Do not swim, wade, or wash in fresh water ponds, lakes, or rivers.
- Do not touch dirt or sand with your bare hands or feet.



#2 7.9 sentences  
142 syllables



**Traveler's Diarrhea:** You can get sick from eating food or drinking water that has germs or parasites in it. This is called traveler's diarrhea or TD.

If you get TD, you should take Oral Rehydration Salts to replace lost fluids. You can buy them in food and drug stores almost anywhere in Asia. Most people can treat themselves with these salts, but

### **talk to a doctor if you:**

- ✓ get bloody diarrhea, chills, or fever
- ✓ can't keep fluids down or become dehydrated
- ✓ are pregnant
- ✓ do not get better in 7 days
- ✓ want medicine to make you feel better

**Warning:** *If your child gets TD, see a doctor right away.*

## Protect Yourself from Insect Bites

Some insects carry diseases that can make you very sick. Here's how to avoid insect bites.



- Cover up—wear long sleeves and long pants or skirts.
- Use bug spray with DEET (a type of bug repellent) on exposed skin—follow all directions and safety warnings on the label.
- Head indoors when it gets dark.
- Stay in houses or tents with screens.
- Use mosquito nets or bednets.

#3 9.4 sentences  
158 syllables

## Good Health Habits:

### Don't Leave Home Without Them

When you travel, bring along your good safety and health habits. These tips will help you stay safe and healthy where ever you go.

- Wear sunscreen to protect against sunburn.
- Drink plenty of bottled water to prevent dehydration.
- Use seatbelts when driving or riding in a car.
- Wear helmets while on bicycles or motorcycles.
- Wear sturdy, comfortable walking shoes.
- Do not have sex or share a needle with anyone who might have an STD (sexually transmitted disease).

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*Even if you follow the safety tips for avoiding insect bites, you could get malaria while traveling in Asia. Malaria is a disease you can get from mosquito bites.*

### How can I prevent malaria?

There are three drugs that can prevent malaria. The doctor will decide which drug you need based on where you are traveling and what kinds of health conditions you may have.

#### **Be sure to tell the doctor if you:**

- are pregnant
- have an allergy to any drug
- have epilepsy or any psychiatric disorder
- are taking a prescription or over-the-counter medicine

Avg # Sentences = 7.1  
Avg # Syllables = 151  
Reading Level = 7th grade

### How do I know if I have malaria?

Signs that you might have malaria include:

- flu-like symptoms
- fever
- chills
- achiness
- fatigue

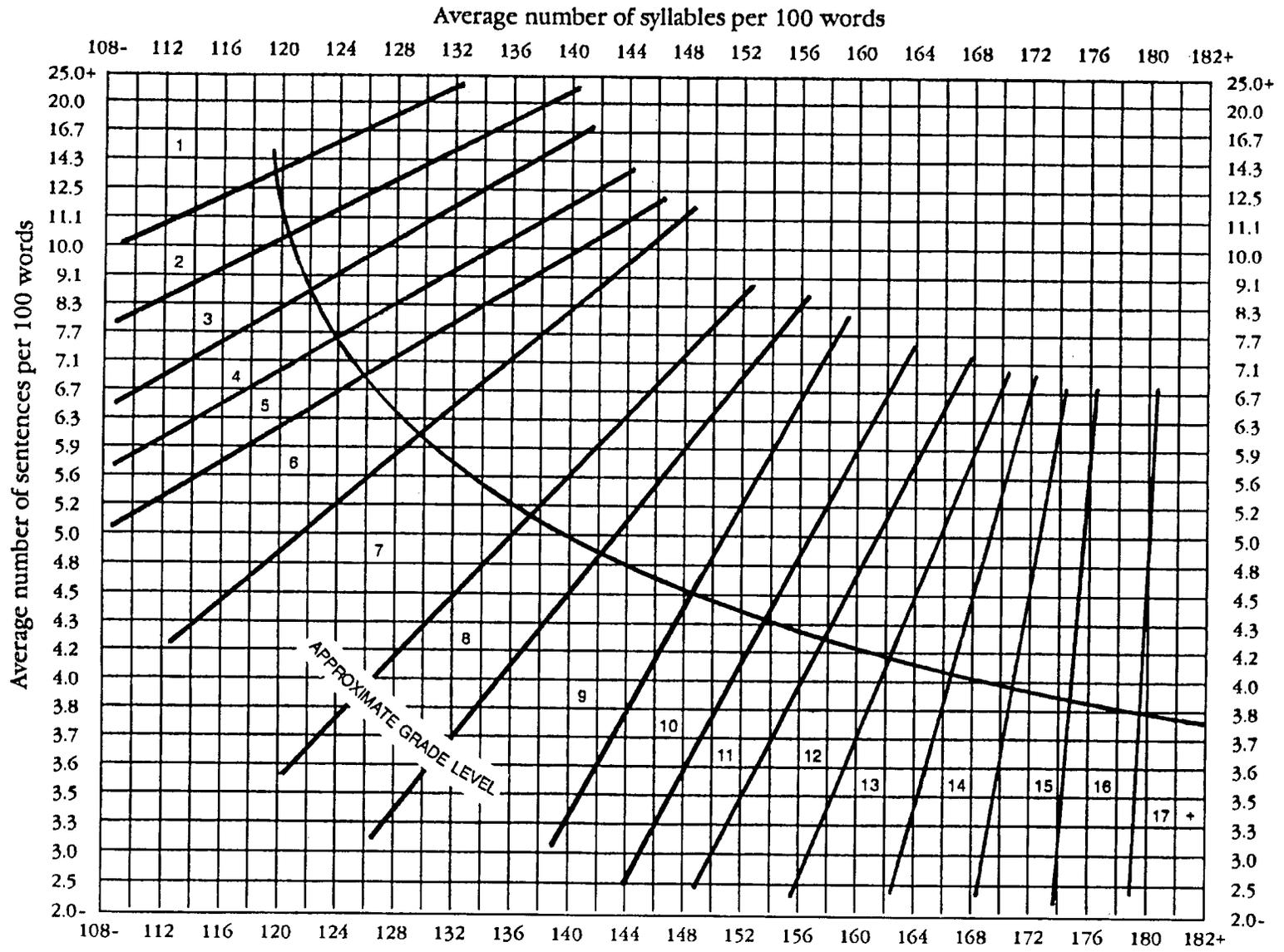
If you have any of these symptoms while you are traveling, or for one year after you return home, see a doctor. There are medicines you must take to cure malaria. If malaria is left untreated, you could develop serious health problems.

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**~Have a safe and healthy trip!~**

# Graph for Estimating Readability—Extended



# Appendix A

## Checklist for Easy-to-Read Print Materials

- Have you limited your messages to 3-4 per document (or section)? Have you left out information that is “nice to know” but not necessary?
- Is the most important information at the beginning of the document, and repeated at the end?
- Have you identified action steps or desired behaviors for your audience?
- Is information presented in an order that is logical to your audience?
- Is information chunked, using headings and subheadings? Do lists include bullets?
- Is the language culturally appropriate? And the visuals?
- Have you eliminated as much jargon and technical language as possible? Is technical or scientific language explained?
- Have you used concrete nouns, active voice, and short words and sentences? Is the style conversational?
- Is the cover attractive to your target audience? Does it include your main message?
- Are your visuals simple and instructive rather than decorative? Do they help explain the messages found in the text?
- Are your visuals placed near related text? Do they include captions?
- Does your document have lots of white space? Are margins at least 1/2 inch?
- Is the print large enough (at least 12 points) and does it have serifs?
- Have you used bold, underlining, and text boxes to highlight information? And avoided using all capital letters?
- Is text justified on the left only? Did you use columns?

# Appendix B

## Resources for Communication Planning

Here are some additional resources for doing effective communication planning.

1. CDC's Office of Communication (OC)  
Division of Health Communication 404/639-7280  
Media Relations Division 404/639-7290
2. *CDCynergy*. This is an interactive CD-ROM health communication planning tool, developed by CDC's Office of Communication. It includes:
  - an on-line workbook for developing a communication plan
  - information and examples to guide you in making choices about audiences, messages, channels, implementation, and evaluation
  - a glossary of health communication terms
  - a quick training guide to using the software

To receive training for using CDCynergy, call Christine Prue at 404/639-7287.

3. *HealthComm Key*. Found on CDC's Intranet, and soon to be on the Internet, HealthComm Key is a searchable database of health communication literature developed by the CDC Office of Communication to help intervention planners make good decisions. You'll find it at <http://inside.cdc.gov/hcomm/hcommbegin>.

4. *Making Health Communication Programs Work: A Planner's Guide*. Provides good basic instruction on communication planning, from formative research to evaluation. It is currently being revised, but an online version is available at <http://www.emerson.edu/acadepts/cs/healthcom/Resources/planguid.htm>.

5. *Marketing Matters: Building an Effective Communications Program*. Provides a good overview of communication planning and includes appendices with examples of best practices. Available from the Administration for Children and Families. Call 1-800-FYI-3366 or write:

National Clearinghouse on Child Abuse and Neglect Information  
P.O. Box 1182  
Washington, D.C. 20013-1182

# Appendix C

## CIO Communication Offices

For questions about communication issues, contact your CIO's lead communication office. If you're not sure whom to call, check the list below.

National Center for Chronic Disease Prevention and Health Promotion	770/488-5706
National Center for Environmental Health	770/488-7029
National Center for Health Statistics	301/436-7551
National Center for HIV, STD and TB Prevention	404/639-8890
National Center for Infectious Diseases	404/639-3473
National Center for Injury Prevention and Control	770/488-4665
National Immunization Program	404/639-8375
National Institute for Occupational Safety and Health	202/401-3749
Epidemiology Program Office	404/639-1541
Office of Global Health	770/488-1085
Public Health Practice Program Office	770/488-2446
Agency for Toxic Substances and Disease Registry	404/639-0500

## References

- Administration for Children and Families, Department of Health and Human Services. *Marketing Matters: Building an Effective Communications Program*.
- Agricultural Communicators in Education. *The Communicator's Handbook: Tools, Techniques and Technology*. Gainesville, FL: Maupin House, 1996.
- Brockett RG. Developing Written Learning Materials: A Proactive Approach. *Lifelong Learning*, 1984, 7(5):16-18,28.
- Cardinal B, Seidler T. Readability and Comprehensibility of the "Exercise Lite" Brochure. *Perceptual and Motor Skills*, 1995, 80:399-402.
- Coey L. Readability of Printed Educational Materials Used to Inform Potential and Actual Ostomates. *Journal of Clinical Nursing*, 1996, 5:359-366.
- Davis R, Jackson R, et al. Comprehension is Greater Using a Short Vaccine Information Pamphlet with Graphics and Simple Language. *Journal of General Internal Medicine*, 1994, 9(Supp. 2):103.
- Davis T, Bocchini J, et al. Parent Comprehension of Polio Vaccine Information Pamphlets. *Pediatrics*, 1996, 97(6):804-810.
- Doak C, Doak L, Root J. *Teaching Patients with Low Literacy Skills*. New York: J. B. Lippencott, 1985.
- Freimuth V. Assessing the Readability of Health Education Messages. *Public Health Reports*, 1979, 94(6):568-560.
- Hacker CJ. From Schema Theory to Classroom Practice. *Language Arts*, 1980, 57:866.
- Knox A. *Adult Development and Learning*. San Francisco: Jossey-Bass, 1977.
- Koba H. Putting it Plainly Becomes Communications Mission of Ontario's Ministry of Health. *Journal of the Canadian Medical Association*, 1993, 148(7):1202-1203.

- Lange JW. Developing Printed Materials for Patient Education. *Dimensions of Critical Care Nursing*, 1989, 8(4):250-258.
- Masset H. Evaluation of CDC Print Materials. Presentation to Office of Communication, CDC, December 1996.
- Mathis, DB. Writing Patient Education Materials. *Orthopaedic Nursing*, 1989, 8(5):39-42.
- Mattran KJ. From Illiteracy to Literacy. *Reading Psychology*, 1981, 2:165.
- Mayeaux EJ, Murphy P, et al. Improving Patient Education for Patients with Low Literacy Skills. *American Family Physician*, 1996, 53(1):205-211.
- Meade C, Byrd J, Lee M. Improving Patient Comprehension of Literature on Smoking. *American Journal of Public Health*, 1979, 79(10):1411-1412.
- Meade C, Byrd J. Patient Literacy and the Readability of Smoking Education Literature. *American Journal of Public Health*, 1989, 79(2):204-206.
- Meade C, Howser D. Consent Forms: How to Determine and Improve Their Readability. *Oncology Nursing Forum*, 1992, 19(10):1523-1528.
- Meade C, McKinney W, Barnas G. Educating Patients with Limited Literacy Skills: The Effectiveness of Printed and Videotaped Materials about Colon Cancer. *American Journal of Public Health*, 1994, 84(1):119-121.
- Michielutte R, Bahnson B, Beal P. Readability of the Public Education Literature on Cancer Prevention and Detection. *Journal of Cancer Education*, 1990, 5(1):55-61.
- Michielutte R, Bahnson J, Dignan M, Schroeder E. The Use of Illustrations and Narrative Text Style to Improve Readability of a Health Education Brochure. *Journal of Cancer Education*, 1992, 7(3):251-260.
- National Cancer Institute, National Institutes of Health, DHHS. *Clear and Simple: Developing Effective Print Materials for Low Literate Readers*, 1994.
- National Center for Adult Literacy. Health Promotion Council's Health Literacy Project. Heartmemo, 1993, 15(Winter).
- National Institutes of Health, DHHS. *Making Health Communication Programs Work: A Planner's Guide*, 1989.

Perrin B. Literacy and Health: Making the Connection. *Health Promotion*, 1989, 28(1):2-5.

Pichert JW, Elam P. Readability Formulas May Mislead You. *Patient Education and Counseling*, 1985, 7:181-191.

Plimpton S, Root J. Materials and Strategies that Work in Low Literacy Health Communication. *Public Health Reports*, 1994, 109(1):86-92.

Program for Appropriate Technology in Health (PATH). *Developing Health and Family Planning Materials for Low-Literate Audiences: A Guide*, 1996.

Rice M, Valdivia L. A Simple Guide for Design, Use, and Evaluation of Educational Materials. *Health Education Quarterly*, 1991, 18(1):79-85.

Siminerio LM, Frith M. Need to Assess Readability of Written Materials for Diabetes Education Curricula. *Diabetes Care*, 1993, 16(1):391-393.

Root JH. Effective Materials for the Low-Literacy Population. *California AIDS Clearinghouse Reviewer*, 1990, 2(3):1&3.

Smith S, Alford B. Literate and Semi-Literate Audiences: Tips for Effective Teaching. *Journal of Nutrition Education*, 1988, Gem No. 102.

Substance Abuse and Mental Health Services Administration, DHHS. You Can Prepare Easy-to-Read Materials, "The Fact Is..." Communication Series, February 1992.

United States Department of Agriculture. Guidelines: Writing for Adults with Limited Reading Skills, 1988.

Walmsley SA, Allington RL. Reading Abilities of Elderly Persons in Relation to the Difficulty of Essential Documents. *The Gerontologist*, 1982, 22(1):36-38.

Walmsley SA, Scott KM, Lehrer R. Effects of Document Simplification on the Reading Comprehension of the Elderly. *Journal of Reading Behavior*, 1981, 13(3):237-248.

Weiss B, Coyne C. Communicating with Patients Who Cannot Read. *New England Journal of Medicine*, 1997, 337(4):272-274.

Weiss B, Hart G, Pust R. The Relationship Between Literacy and Health. *Journal of Health Care for the Poor and Underserved*, 1991, 1(4):351-363.

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We'd like to know what you think of *Simply Put*. Please take a moment to answer the questions below.

1. On a scale of 1 to 10, how helpful was *Simply Put*?  
(1 = not helpful at all; 10 = very helpful)

1      2      3      4      5      6      7      8      9      10

2. Which section of *Simply Put* was most helpful? Why?

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3. Will you refer to *Simply Put* again when creating or editing print materials?

Yes                  No

4. Would you recommend *Simply Put* to others in your office?

Yes                  No

5. What could we do to improve this publication?

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**Please return this form to:**

**CDC Office of Communication  
1600 Clifton Road, NE, Mailstop D25  
Atlanta, Georgia 30333  
Fax (404) 639-7391**

Centers for Disease Control and Prevention  
Office of Communication  
Atlanta, Georgia

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